

Growth in the region of the lachrymal sac : with the histological characters of tubercle / by G. E. de Schweinitz.

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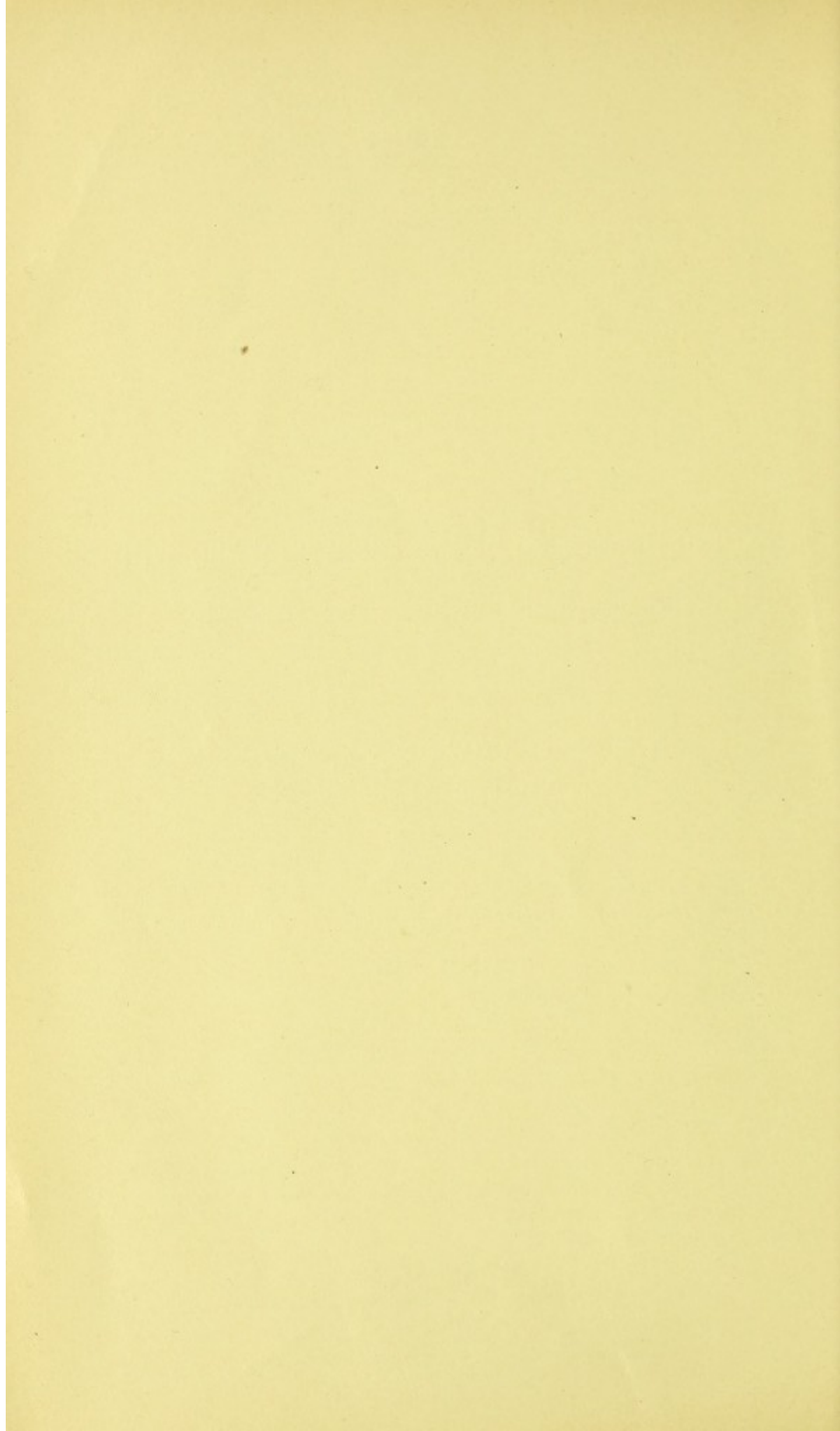


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Growth in the Region of the Lachrymal Sac with
the Histological Characters of Tubercle.

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GROWTH IN THE REGION OF THE LACHRYMAL SAC WITH THE HISTOLOGICAL CHARACTERS OF TUBERCLE.

BY G. E. DESCHWEINITZ, M.D.,
OF PHILADELPHIA.

The following case from the standpoint of histological examination is certainly of unusual and peculiar interest:

James W., aged 29, born in the United States, a paper-hanger, came to the Jefferson Medical College Hospital on the 17th of December, 1897, for relief of obstruction of the right lachrymal duct.

Examination. — The patient was a man in robust health, complaining of nothing except an excessive lachrymation which had existed for three months. There was a moderate amount of lachrymal conjunctivitis; in other respects the eye was normal. The canaliculus was divided and probes passed in the ordinary manner. The patient continued to visit the dispensary from time to time, and although the probes entered freely, the epiphora continued.

In the early portion of 1898 my assistant, Dr. Veasey, noticed that when a probe was passed a swelling appeared in front of the lachrymal sac, especially when the probe was pressed forward. This swelling, about a centimeter in length, gave the impression to the palpating finger of a small tumor; for example, a sebaceous cyst, which seemed, if not actually in association with the lachrymal sac, at least to lie close to it.

Thinking that this growth might be the cause of the continuous obstruction, I advised its removal. Consent was given, and on the 25th of February, 1898, I dissected the small tumor from its bed. It was about eight millimeters in length and half as wide, somewhat pear-shaped, of a grayish yellow color, imbedded in the fibers of the orbicularis and terminating in a somewhat conical end which passed toward the lachrymal sac, but was not actually attached to it.

The wound was closed with a few interrupted sutures and healed promptly and without reaction. The patient was seen

from time to time, a No. 7 Bowman probe passed on each visit, and in a very short time the lachrymation disappeared. The patient has not visited the dispensary since the early spring, as the complaint for which he came had been entirely relieved. The growth was placed in a 5 per cent. solution of formaldehyde and submitted to microscopical examination with the following result:

The growth is partly surrounded by and is partly within the muscle fibers and their associated fibro-fatty tissue, and, in general terms, is composed of cells of various kinds and sizes: lymphoid cells, polynuclear leucocytes, epithelioid cells, oval granular cells, and giant cells, all lying in a faint stroma, which does not assume a positive reticular form. Blood vessels, at least new-formed ones, are absent.

More particular examination shows that this tissue tends to assume a definite formation composed of minute nodules or tubercles, as follows: The nodule is circular or slightly oval in shape and is surrounded by muscle fibers. In its periphery the cells, usually lymphoid, are more closely aggregated than in the intermediate and central parts, where, in addition to these cells, other varieties — oval, spindle, and epithelioid in type — appear, while scattered through the nodule are giant cells, not only centrally but also peripherally situated. As many as a dozen giant cells may be counted in a single nodule. (Fig. 1.) In place of this arrangement in other portions of the section the tissue is composed of a nearly uniform expanse of small, deeply-stained cells resembling the so-called tuberculous granulation tissue, but even within this tissue it is usually possible to recognize the tubercles by the presence of the epithelioid and giant cells. While there is no nodule which exhibits caseation of its center, spots appear here and there which suggest beginning degenerative changes.

From what has been said it is evident that the growth under consideration has the usual composition of tuberculous tissue, and under the microscope does not much differ in appearance from miliary tubercle, for example, in the lung, except in one im-

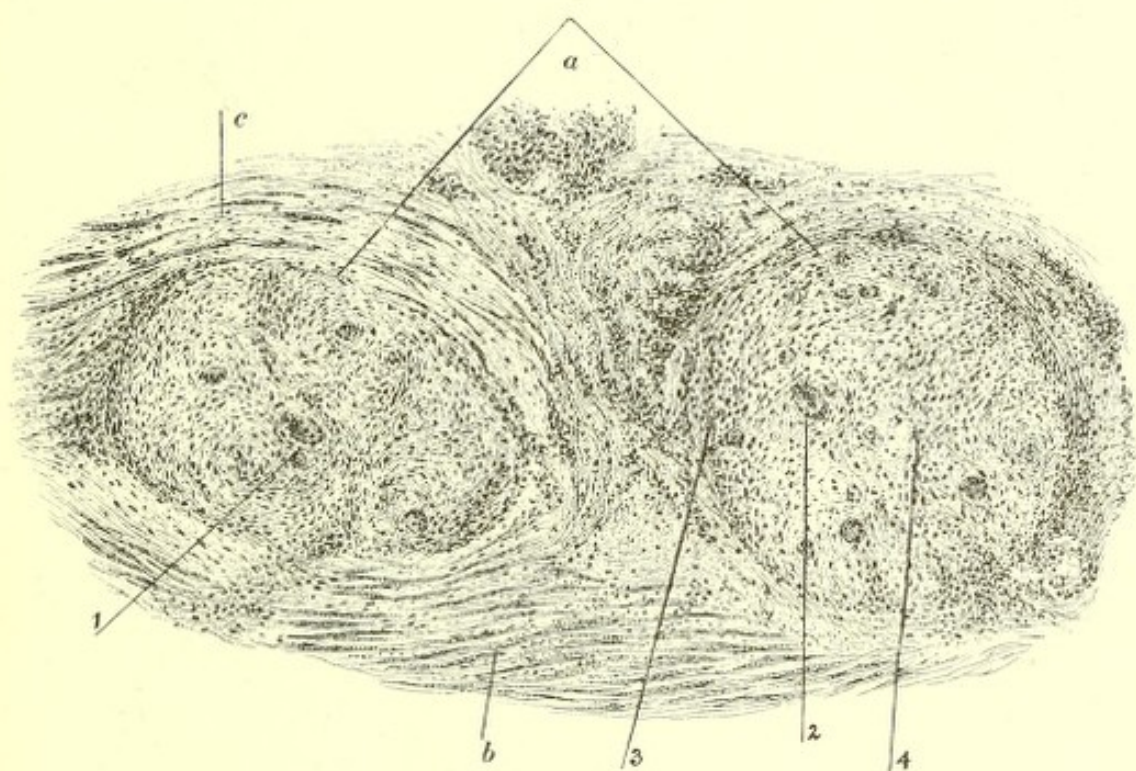


FIG. 1.

Prelachrymal Tuberculous Tissue. (Zeiss' Ocular 8, obj. 16 mm.)

a. Small tubercles, containing: (*1*, *2*) giant cells, (*3*) lymphoid cells, (*4*) epithelioid and oval granular cells. *b*, *c*, Muscle fibres.



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portant particular, the absence of tubercle bacilli, which numerous (18 slides¹) careful examinations by Dr. Steele have failed to detect.

Remarks. — It is scarcely necessary to point out that epithelioid cells and giant cells are not, as was once maintained, characteristic of tuberculosis, inasmuch as they may be found in inflammatory tissue-formation or granulation-tissue, although in the latter, as Ziegler says, "the multinuclear cells occur but sparingly, while in tubercle they are in great numbers and highly developed." At the same time there was nothing connected with this growth to suggest inflammatory origin or the presence of granulation tissue. It was a definite oval growth of grayish color, made up of non-vascular cellular nodules which from the histological point of view repeated the structure of tubercle, and it is difficult to divest one's self of the belief that the tissue is not tuberculous in spite of the absence of the bacillus. If one asks what could have been the origin of the virus which caused this subcutaneous or rather intramuscular nodule in the absence of signs of cutaneous inoculation or neighboring lymphatic involvement, the lachrymal sac, or, rather, the lachrymal passages, at once suggest themselves. While the tumor did not penetrate the sac or involve it, it was in immediate connection with it, and it is conceivable that this should be regarded as the source of infection.

Independently of the interest which attaches to this small growth on account of its resemblance to tubercle, if it is no more than a resemblance, is its situation.² Prelachrymal sac-disease is never common. We are accustomed to observe abscesses in this situation associated with caries of the lachrymal bone, either as the result of injury or from syphilis, and cysts are also described, but a solid growth of this character is new to me, nor have I noted anything like it in literature. Of course, it must not be confounded with the growths which appear in this region and have their origin in the lachrymal sac.

¹The fact that in 18 slides bacilli were not found does not prove that they were absent; the nidus, if it existed, might have escaped the search.

²It may be asked why inoculation experiments were not performed to establish exactly the identity of this growth. The possible tuberculous nature of the neoplasm was necessarily never suspected from clinical signs, and hence there was no thought of such experiments; later, after hardening, etc., they became impossible.

DISCUSSION.

DR. B. E. FRYER, Kansas City. — I would like to ask Dr. deSchweinitz if, in the microscopic examination of the carcinoma, he found the so-called coccidia? In these two cases it would be interesting to know whether they played an important part in the original growth and in the metastatic recurrence.

DR. DESCHWEINITZ. — I did not make an examination of the original growth; it was an ordinary scirrhous of the mamma. No special examinations to demonstrate coccidia in the metastatic growth were made. Personally, I have no faith in the etiological relationship of coccidia to carcinomatous disease.

DR. C. S. BULL. — The case of prelachrymal growth was interesting to me because I had a case last spring which was almost exactly like it. In that case I operated as Dr. deSchweinitz did, supposing I had a prelachrymal cyst, but on incising it it proved to be solid and showed a structure almost exactly like this one of Dr. deSchweinitz. I had it examined for tubercle bacilli, but nothing was found. The child had no symptoms of general tuberculosis, though its appearance was that of a pulmonary tuberculous patient.